

**REMARKS**

Claims 1-11, 13-16 and 19-22 are pending in this application. By this Amendment, claims 1, 15 and 16 are amended and claims 20-22 are added. No new matter is added.

Applicants also again acknowledge the indication that all prior art rejections have been withdrawn. Thus, the application should be in condition for allowance upon overcoming the outstanding rejections under 35 U.S.C. §§112 and 101.

(a) Pending Claims Define Statutory Subject Matter

The Office Action rejects claims 1-11, 13-16 and 19 under 35 U.S.C. § 101 for allegedly not being directed to statutory subject matter. Applicants respectfully disagree.

As clearly recognized by the Examiner, even abstract ideas and mathematical formulas may be eligible patentable subject matter if there is a practical application that has a "useful, tangible, and concrete result." The Examiner's main point of contention is that the claims do not have a useful result. Applicants' respectfully disagree, but amend the claims for further clarity.

Independent claims 1, 15 and 16 are further amended to clarify the practical application and the "useful, tangible and concrete tangible" results achieved by the recited method, program, and system. In particular, each claim now recites that the input is a document data structure (such as the database of book references, or an XML document as disclosed in Applicants' specification on the bottom of page 24 and the various practical applications identified on page 35, lines 22-29). Moreover, it is clarified that the programming language statement (such as a pattern matching filter) achieves a transformation of the data structure in the form of an evaluated result that is output and stored on a computer-readable medium. This is supported, for example, by Fig. 1, page 35, line 22 to page 36, line 26, and the specific example of transforming unstructured book database into transformed

data in the form of a subset of structured data results that match the filter of the programming language statement described on pages 24-25 and page 36, lines 5-11).

As clearly evidenced by the amended claims, each claim now recites a specific real-world data structure, such as XML document data or a database of terms, as an input that is operated on and transformed by evaluation of the first and second sub-statements of the programming language statement (such as a pattern matching filter), into a evaluated result, which transforms the data into a useable form that is stored for subsequent use (such as display or print, etc). Thus, contrary to assertions in the Office Action, there are real-world, practical application (such as pattern matching of XML document strings (page 32, lines 11+) or database transformation and management (page 24, line 20+), which do result in a concrete, useful and tangible result.

Thus, it is respectfully submitted that the claims fully meet all of the statutory requirements for eligible subject matter. In particular, as set forth in *AT&T Corp. v. Excel Comm. Inc.*, 172 F.3d 1352, 1358-59, 50 USPQ2d 1447, 1452 (Fed. Cir. 1999), the focus of the analysis is on whether "the final result achieved by the claimed invention is useful, tangible and concrete." As recited in the pending claims the final result is "useful" because it is specific, substantial, and credible (i.e., it can enable pattern matching of complex arbitrary data structures into an evaluated result through use of reduced complexity language statements). The final result is also "tangible" because it sets forth a "real-world" result, such as a pattern match of an expression in a specific real-world text string within a document or a transformation of the document data based on the evaluated expression (such as a filter for specific data within a large database of document data). The final result is also "concrete" because it is substantially repeatable and embodied in a useable form (i.e., stored in memory for subsequent display, printing, use in further analysis, etc.) That is, the process may act on

the same data structure and output the same repeatable output pattern or result of comparison (i.e., indication of pattern match).

Thus, the subject matter of independent claims 1, 15 and 16 is not merely an expression of a mathematical formula or abstract idea, but an expression of specific, real-world, practical applications that have useful, tangible and concrete results. The various claims also are useful because they enable evaluation of arbitrary complex data structures through use of bi-valuation, whereas typical conventional programming language statements were either imperative or declarative and could address either specific or abstract detail, but could not readily address intermediate levels of abstraction. Because of this, the inventive method, program and system are able to address the complexities without the excessive programming overhead associated with use of an imperative language or the inabilities of a declarative language to address the complexities (page 1, line 20 to page 2, line 33).

Accordingly, the subject matter of independent claims 1, 15 and 16 and claims dependent therefrom is directed to statutory subject matter. Withdrawal of the rejection is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-16 and 19 are earnestly solicited.

New claims 20-22 further define a concrete result by specifying a particular input and output type. Claims 20-22 are also directed to statutory subject matter and allowable.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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